UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/805,413	03/13/2001	Randal Lee Bertram	RAL920000116US1	1980

25299 7590 07/29/2004

IBM CORPORATION
PO BOX 12195
DEPT 9CCA, BLDG 002
RESEARCH TRIANGLE PARK, NC 27709

EXAMINER	
COLLINS, SCOTT M	

ART UNIT	PAPER NUMBER
2145	

DATE MAILED: 07/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/805,413	BERTRAM ET AL.	
	Examiner	Art Unit	
	Scott M. Collins	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 March 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *03/13/200*
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-16 examined.

2. It is hereby acknowledged that the following papers have been received and placed of record in the file: Change of Address on 11/11/2002.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-6, and 13-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Bhat, U.S. Patent Number 5,668,995 (herein referred to as Bhat).

5. Referring to claims 1, 13, and 14, Bhat has taught a method for providing performance analysis on a system including a cluster, the cluster including a plurality of nodes (Bhat abstract; and column 1, line 52 – column 2, line 10 where the system is noted to be in a "client/server environment" or networked system that inherently includes a plurality of nodes.), the method comprising the steps of:

a. obtaining data for the plurality of nodes in the cluster, the data relating to a plurality of monitors for the node (Bhat column 3, lines 6-14; and column 5, lines 8-50);

b. whether or not the computer system is the cluster, analyzing the data to determine whether performance of the cluster can be improved (Bhat column 5, lines 52-61);

c. providing at least one remedy to improve performance of the cluster if the performance of the cluster can be improved, the at least one remedy capable of including a cluster level remedy (Bhat column 5, line 62 – column 6, line 9).

6. Referring to claims 2-4, Bhat has taught the method wherein the data analyzing step further includes the steps of determining whether a latent bottleneck exists or will exist for at least one monitor of the plurality of monitors for the plurality of nodes (Bhat column 5, lines 52-61).

7. Referring to claim 5, Bhat has taught the method wherein the plurality of monitors include disk utilization, CPU utilization, memory using, and LAN (Bhat column 3, lines 6-14 and 29; column 5, lines 58-61; and column 6, lines 20-24).

8. Referring to claim 15, Bhat has taught a system programmed to provide performance analysis on a network including a plurality of systems, the plurality of systems including a cluster, the cluster including a plurality of nodes (Bhat abstract; and column 1, line 52 – column 2, line 10 where the system is noted to be in a "client/server environment" or networked system that inherently includes a plurality of nodes.), the system comprising:

a. means for obtaining data for each node of the plurality of nodes in the cluster, the data relating to a plurality of monitors for the node and for analyzing the data to determine whether performance of the cluster can be improved (Bhat figure 2b; column 3, lines 6-14; and column 5, lines 8-61); and

b. a graphical user interface for displaying at least one remedy to improve performance of the cluster if the performance of the cluster can be improved, the at least one

remedy capable of including a cluster level remedy (Bhat figure 1, elements 12 and 24; column 5, lines 52-61).

9. Referring to claim 16, Bhat has taught the system wherein the obtaining and analyzing means further include a plurality of agents residing in the plurality of computer systems (Bhat column 3, lines 6-14 where the information is inherently retrieved by an agent within the system).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 6-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhat in view of Sudo, U.S. Patent Number 5,692,192 (herein referred to as Sudo).

12. Referring to claims 6-12, Bhat has not expressly disclosed translating the methods of receiving various utilization information for a particular system and providing an output remedy to receiving various utilization information for multiple nodes and providing a system-wide output remedy. However, it logically flows that since Bhat's system is located with in a networked environment (Bhat column 1, line 52 – column 2, line 10 where the system is noted to be in a "client/server environment" or networked system that inherently includes a plurality of nodes.), then the methods can be replicated in order to provide a system-wide output remedy.

13. Referring to claim 6, Bhat has not disclosed transferring loads from one node to another node. Sudo has taught the method wherein the cluster remedy is capable of including

transferring a load from a first node of the plurality of nodes to a second node of the plurality of nodes (Sudo abstract and figures 4, 5, and 9). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to transfer a load from a heavily loaded node to a lightly loaded node (Sudo abstract). One of ordinary skill in the art would have been motivated to do this in order to better evenly distribute the load of processing across available nodes (Bhat column 6, lines 20-24).

14. Referring to claim 7, Sudo has taught the method wherein the cluster remedy is capable of including adding a new node to the plurality of nodes of the at least one cluster (Sudo abstract and figures 4, 5, and 9; see also paragraphs 12-13 above.).

15. Referring to claims 8-12, Bhat has disclosed identifying potential network bottlenecks (Bhat column 5, lines 58-61). Referring specifically to claims 8 and 9, Bhat has not expressly disclosed any warnings or notifications that any particular network node may be a source of a bottleneck. Sudo has taught the method wherein the cluster remedy is capable of including a warning or notification that if a particular node of the plurality of nodes fails, at least one remaining node of the plurality of nodes may become bottlenecked or that a companion node of the plurality of nodes may be a source of a bottleneck if another node of the plurality of nodes is bottlenecked (Sudo column 5, lines 8-39 where a bottleneck is expressed as a heavily loaded node. See also paragraphs 12 and 13 above.).

16. Referring to claim 10, Sudo has taught the method wherein a node of the plurality of nodes carries a workload and has a bottleneck, wherein a companion node of the plurality of nodes is capable of supporting a portion of the workload, and wherein the cluster remedy is capable of including a notification that the portion of the workload can be moved to the

companion node (Sudo column 5, lines 8-39 where a bottleneck is expressed as a heavily loaded node. See also paragraphs 12 and 13 above.).

17. Referring to claim 11, Sudo has taught the method wherein if a node of the plurality of nodes fails, at least one remaining node of the plurality of nodes will become bottlenecked and wherein the cluster remedy is capable of including notification that if the node fails, the at least one remaining node of the plurality of nodes will become bottlenecked (Sudo column 5, lines 8-39 where a bottleneck is expressed as a heavily loaded node. See also paragraphs 12 and 13 above.).

18. Referring to claim 12, Bhat has taught the method further comprising the step of obtaining information relating to the cluster the information including an indication of whether each of the plurality of nodes is a passive node, a maximum number of nodes in the cluster and a type of LAN adapter used for interconnecting the plurality of nodes (Bhat column 3, lines 12-14; column 4, lines 22-30 and 51-57; and column 6, lines 6-24). Bhat does not explicitly specify a type of LAN adapter, but Bhat completely describes an appropriate system after analyzing network usage. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to further describe the remedy providing system by recommending a specific LAN adapter. One of ordinary skill in the art would have been motivated to do this because it would be beneficial to also include this information with the remedy system and especially since the network analysis has already been performed for the system.

Conclusion

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott M. Collins whose telephone number is 703.305.7865. The examiner can normally be reached on Mon.-Thurs. 7:30 am - 5:30 pm.

20. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Wiley can be reached on 703.308.5221. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

21. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

smc
July 22, 2004

DAVID WILEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100